#7 0360/0593

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RAW SEQUENCE LISTING                    DATE: 03/06/2002 P.5
PATENT APPLICATION:  US/09/990,940      TIME: 12:49:17

Input Set : A:\-74-1.app
Output Set: N:\CRF3\03062002\I990940.raw

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 3 <110> APPLICANT: Tian, Hui
 4        Zhao, Jiagang
 5        Chen, Jin-Long
 6        Cutler, Gene
 7        An, Songzhu
 8        Dai, Kang
 9        Gupte, Jamila S.
10        Tularik Inc.
12 <120> TITLE OF INVENTION: Novel Receptors
14 <130> FILE REFERENCE: 018781-007410US
16 <140> CURRENT APPLICATION NUMBER: US 09/990,940
17 <141> CURRENT FILING DATE: 2001-11-21
19 <150> PRIOR APPLICATION NUMBER: US 60/252,841
20 <151> PRIOR FILING DATE: 2000-11-22
22 <150> PRIOR APPLICATION NUMBER: US 60/257,636
23 <151> PRIOR FILING DATE: 2000-12-22
25 <150> PRIOR APPLICATION NUMBER: US 60/261,377
26 <151> PRIOR FILING DATE: 2001-01-12
28 <150> PRIOR APPLICATION NUMBER: US 60/279,554
29 <151> PRIOR FILING DATE: 2001-03-28
31 <150> PRIOR APPLICATION NUMBER: US 60/280,696
32 <151> PRIOR FILING DATE: 2001-03-29
34 <160> NUMBER OF SEQ ID NOS: 54
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40 <212> TYPE: DNA
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47        melanin-concentrating hormone receptor 2 (MCHr2)
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52 attgggatta tctgttcaac agggctggtt ggcaacatcc tcattgtatt cactataata 180
53 agatccagga aaaaaacagt ccctgacatc tatatctgca acctggctgt ggctgatttg 240
54 gtccacatag ttggaatgcc ttttcttatt caccaatggg cccgaggggg agagtgggtg 300
55 tttggggggc ctctctgcac catcatcaca tccctggata cttgtaacca atttgcctgt 360
56 agtgccatca tgactgtaat gagtgtggac aggtactttg ccctcgtcca accatttcga 420
57 ctgacacgtt ggagaacaag gtacaagacc atccggatca atttgggcct tgggcagct 480
58 tcctttatcc tggcattgcc tgtctgggtc tactcgaagg tcatcaaatt taaagacggt 540
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Input Set : A:\-74-1.app
Output Set: N:\CRF3\03062002\I990940.raw

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60 ttgacgataa caactttttt tttccctcta cccttgattt tggtgtgcta tattttaatt 660
61 ttatgctata cttgggagat gtatcaacag aataaggatg ccagatgctg caatcccagt 720
62 gtaccaaaac agagagtgat gaagttgaca aagatggtgc tggtgctggt ggtagtcttt 780
63 atcctgagtg ctgcccctta tcatgtgata caactggtga acttacagat ggaacagccc 840
64 acactggcct tctatgtggg ttattacctc tccatctgtc tcagctatgc cagcagcagc 900
65 attaaccctt ttctctacat cctgctgagt ggaaatttcc agaaacgtct gcctcaaatc 960
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72 <212> TYPE: PRT
73 <213> ORGANISM: Homo sapiens
75 <220> FEATURE:
76 <223> OTHER INFORMATION: human G-protein coupled receptor (GPCR) TGR342,
77        melanin-concentrating hormone receptor 2 (MCHr2)
79 <400> SEQUENCE: 2
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81  1               5                  10                  15
82 Asn Lys Ser Trp Asn Lys Glu Phe Ala Tyr Gln Thr Ala Ser Val Val
83              20                  25                  30
84 Asp Thr Val Ile Leu Pro Ser Met Ile Gly Ile Ile Cys Ser Thr Gly
85          35                  40                  45
86 Leu Val Gly Asn Ile Leu Ile Val Phe Thr Ile Ile Arg Ser Arg Lys
87      50                  55                  60
88 Lys Thr Val Pro Asp Ile Tyr Ile Cys Asn Leu Ala Val Ala Asp Leu
89  65                  70                  75                  80
90 Val His Ile Val Gly Met Pro Phe Leu Ile His Gln Trp Ala Arg Gly
91              85                  90                  95
92 Gly Glu Trp Val Phe Gly Gly Pro Leu Cys Thr Ile Ile Thr Ser Leu
93              100                 105                 110
94 Asp Thr Cys Asn Gln Phe Ala Cys Ser Ala Ile Met Thr Val Met Ser
95          115                 120                 125
96 Val Asp Arg Tyr Phe Ala Leu Val Gln Pro Phe Arg Leu Thr Arg Trp
97      130                 135                 140
98 Arg Thr Arg Tyr Lys Thr Ile Arg Ile Asn Leu Gly Leu Trp Ala Ala
99 145                 150                 155                 160
100 Ser Phe Ile Leu Ala Leu Pro Val Trp Val Tyr Ser Lys Val Ile Lys
101             165                 170                 175
102 Phe Lys Asp Gly Val Glu Ser Cys Ala Phe Asp Leu Thr Ser Pro Asp
103             180                 185                 190
104 Asp Val Leu Trp Tyr Thr Leu Tyr Leu Thr Ile Thr Thr Phe Phe Phe
105         195                 200                 205
106 Pro Leu Pro Leu Ile Leu Val Cys Tyr Ile Leu Ile Leu Cys Tyr Thr
107      210                 215                 220
108 Trp Glu Met Tyr Gln Gln Asn Lys Asp Ala Arg Cys Cys Asn Pro Ser
109 225                 230                 235                 240
110 Val Pro Lys Gln Arg Val Met Lys Leu Thr Lys Met Val Leu Val Leu
111             245                 250                 255
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Input Set : **A:\-74-1.app**
Output Set: **N:\CRF3\03062002\I990940.raw**

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114 Val Asn Leu Gln Met Glu Gln Pro Thr Leu Ala Phe Tyr Val Gly Tyr
115         275             280             285
116 Tyr Leu Ser Ile Cys Leu Ser Tyr Ala Ser Ser Ser Ile Asn Pro Phe
117     290             295             300
118 Leu Tyr Ile Leu Leu Ser Gly Asn Phe Gln Lys Arg Leu Pro Gln Ile
119 305             310             315             320
120 Gln Arg Arg Ala Thr Glu Lys Glu Ile Asn Asn Met Gly Asn Thr Leu
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123         340
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131 <220> FEATURE:
132 <221> NAME/KEY: CDS
133 <222> LOCATION: (1)..(1002)
134 <223> OTHER INFORMATION: human G-protein coupled receptor (GPCR) TGR339
136 <400> SEQUENCE: 3
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138 gacctgcagc tggggctgtc actgttgtcg ctgctgggcc tggtggtggg cgtgccagtg 120
139 ggcctgtgct acaacgccct gctggtgctg gccaacctac acagcaaggc cagcatgacc 180
140 atgccggacg tgtactttgt caacatggca gtggcaggcc tggtgctcag cgccctggcc 240
141 cctgtgcacc tgctcggccc cccgagctcc cggtgggcgc tgtggagtgt gggcggcgaa 300
142 gtccacgtgg cactgcagat ccccttcaat gtgtcctcac tggtggccat gtactccacc 360
143 gccctgctga gcctcgacca ctacatcgag cgtgcactgc cgcggaccta catggccagc 420
144 gtgtacaaca cgcggcacgt gtgcggcttc gtgtggggtg gcgcgctgct gaccagcttc 480
145 tcctcgctgc tcttctacat ctgcagccat gtgtccaccc gcgcgctaga gtgcgccaag 540
146 atgcagaacg cagaagctgc cgacgccacg ctggtgttca tcggctacgt ggtgccagca 600
147 ctggccaccc tctacgcgct ggtgctactc tcccgcgtcc gcagggagga cacgcccctg 660
148 gaccgggaca cgggccggct ggagccctcg gcacacaggc tgctggtggc caccgtgtgc 720
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150 tcgcgaggga agcccgtgga cgcacactac ctggggctac tgcactttgt gaaggatttc 840
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152 cagagcttcc ccagcaagct ccaacggctg atgaaaaagc tgccctgcgg ggaccggcac 960
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157 <211> LENGTH: 333
158 <212> TYPE: PRT
159 <213> ORGANISM: Homo sapiens
161 <220> FEATURE:
162 <223> OTHER INFORMATION: human G-protein coupled receptor (GPCR) TGR339
164 <400> SEQUENCE: 4
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168         20             25             30
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RAW SEQUENCE LISTING                    DATE: 03/06/2002
PATENT APPLICATION:  US/09/990,940      TIME: 12:49:17

Input Set : A:\-74-1.app
Output Set: N:\CRF3\03062002\I990940.raw

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171 Val Leu Ala Asn Leu His Ser Lys Ala Ser Met Thr Met Pro Asp Val
172         50              55                  60
173 Tyr Phe Val Asn Met Ala Val Ala Gly Leu Val Leu Ser Ala Leu Ala
174 65              70                  75                      80
175 Pro Val His Leu Leu Gly Pro Pro Ser Ser Arg Trp Ala Leu Trp Ser .
176             85              90                  95
177 Val Gly Gly Glu Val His Val Ala Leu Gln Ile Pro Phe Asn Val Ser
178         100             105                 110
179 Ser Leu Val Ala Met Tyr Ser Thr Ala Leu Leu Ser Leu Asp His Tyr
180         115             120                 125
181 Ile Glu Arg Ala Leu Pro Arg Thr Tyr Met Ala Ser Val Tyr Asn Thr
182     130             135                 140
183 Arg His Val Cys Gly Phe Val Trp Gly Gly Ala Leu Leu Thr Ser Phe
184 145             150                 155                     160
185 Ser Ser Leu Leu Phe Tyr Ile Cys Ser His Val Ser Thr Arg Ala Leu
186             165                 170                 175
187 Glu Cys Ala Lys Met Gln Asn Ala Glu Ala Ala Asp Ala Thr Leu Val
188             180                 185                 190
189 Phe Ile Gly Tyr Val Val Pro Ala Leu Ala Thr Leu Tyr Ala Leu Val
190         195                 200                 205
191 Leu Leu Ser Arg Val Arg Arg Glu Asp Thr Pro Leu Asp Arg Asp Thr
192         210                 215                 220
193 Gly Arg Leu Glu Pro Ser Ala His Arg Leu Leu Val Ala Thr Val Cys
194 225             230                 235                     240
195 Thr Gln Phe Gly Leu Trp Thr Pro His Tyr Leu Ile Leu Leu Gly His
196             245                 250                 255
197 Thr Val Ile Ile Ser Arg Gly Lys Pro Val Asp Ala His Tyr Leu Gly
198             260                 265                 270
199 Leu Leu His Phe Val Lys Asp Phe Ser Lys Leu Leu Ala Phe Ser Ser
200         275                 280                 285
201 Ser Phe Val Thr Pro Leu Leu Tyr Arg Tyr Met Asn Gln Ser Phe Pro
202     290                 295                 300
203 Ser Lys Leu Gln Arg Leu Met Lys Lys Leu Pro Cys Gly Asp Arg His
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206             325                 330
209 <210> SEQ ID NO: 5
210 <211> LENGTH: 1296
211 <212> TYPE: DNA
212 <213> ORGANISM: Homo sapiens
214 <220> FEATURE:
215 <221> NAME/KEY: CDS
216 <222> LOCATION: (1)..(1296)
217 <223> OTHER INFORMATION: human G-protein coupled receptor (GPCR) TGR346
219 <400> SEQUENCE: 5
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PATENT APPLICATION: **US/09/990,940**     TIME: 12:49:17

Input Set : **A:\-74-1.app**
Output Set: **N:\CRF3\03062002\I990940.raw**

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223 tttggcaatg ctctggtgtt ctacgtggtg acccgcagca aggccatgcg caccgtcacc 240
224 aacatcttta tctgctcctt ggcgctcagt gacctgctca tcaccttctt ctgcattccc 300
225 gtcaccatgc tccagaacat ttccgacaac tggctggggg gtgctttcat ttgcaagatg 360
226 gtgccatttg tccagtctac cgctgttgtg acagaaatcc tcactatgac ctgcattgct 420
227 gtggaaaggc accagggact tgtgcatcct tttaaaatga agtggcaata caccaaccga 480
228 agggctttca caatgctagg tgtggtctgg ctggtggcag tcatcgtagg atcacccatg 540
229 tggcacgtgc aacaacttga gatcaaatat gacttcctat atgaaaagga acacatctgc 600
230 tgcttagaag agtggaccag ccctgtgcac cagaagatct acaccacctt catccttgtc 660
231 atcctcttcc tcctgcctct tatggtgatg cttattctgt acagtaaaat tggttatgaa 720
232 ctttggataa agaaaagagt tggggatggt tcagtgcttc gaactattca tggaaaagaa 780
233 atgtccaaaa tagccaggaa gaagaaacga gctgtcatta tgatggtgac agtggtggct 840
234 ctctttgctg tgtgctgggc accattccat gttgtccata tgatgattga atacagtaat 900
235 tttgaaaagg aatatgatga tgtcacaatc aagatgattt ttgctatcgt gcaaattatt 960
236 ggattttcca actccatctg taatcccatt gtctatgcat ttatgaatga aaacttcaaa 1020
237 aaaaatgttt tgtctgcagt ttgttattgc atagtaaata aaaccttctc tccagcacaa 1080
238 aggcatggaa attcaggaat tacaatgatg cggaagaaag caaagttttc cctcagagag 1140
239 aatccagtgg aggaaaccaa aggagaagca ttcagtgatg gcaacattga agtcaaattg 1200
240 tgtgaacaga cagaggagaa gaaaaagctc aaacgacatc ttgctctctt taggtctgaa 1260
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244 <210> SEQ ID NO: 6
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246 <212> TYPE: PRT
247 <213> ORGANISM: Homo sapiens
249 <220> FEATURE:
250 <223> OTHER INFORMATION: human G-protein coupled receptor (GPCR) TGR346
252 <400> SEQUENCE: 6

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255 Asp His Asn Leu Thr Arg Glu Gln Phe Ile Ala Leu Tyr Arg Leu Arg
256                 20                  25                  30
257 Pro Leu Val Tyr Thr Pro Glu Leu Pro Gly Arg Ala Lys Leu Ala Leu
258            ·35                  40                  45
259 Val Leu Thr Gly Val Leu Ile Phe Ala Leu Ala Leu Phe Gly Asn Ala
260      50                  55                  60
261 Leu Val Phe Tyr Val Val Thr Arg Ser Lys Ala Met Arg Thr Val Thr
262  65                  70                  75                  80
263 Asn Ile Phe Ile Cys Ser Leu Ala Leu Ser Asp Leu Leu Ile Thr Phe
264                 85                  90                  95
265 Phe Cys Ile Pro Val Thr Met Leu Gln Asn Ile Ser Asp Asn Trp Leu
266                100                 105                 110
267 Gly Gly Ala Phe Ile Cys Lys Met Val Pro Phe Val Gln Ser Thr Ala
268            115                 120                 125
269 Val Val Thr Glu Ile Leu Thr Met Thr Cys Ile Ala Val Glu Arg His
270      130                 135                 140
271 Gln Gly Leu Val His Pro Phe Lys Met Lys Trp Gln Tyr Thr Asn Arg
272 145                 150                 155                 160
273 Arg Ala Phe Thr Met Leu Gly Val Val Trp Leu Val Ala Val Ile Val
274                165                 170                 175
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Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

**VERIFICATION SUMMARY**                          DATE: 03/06/2002
PATENT APPLICATION:   **US/09/990,940**          TIME: 12:49:18

Input Set : **A:\-74-1.app**
Output Set: **N:\CRF3\03062002\I990940.raw**

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(1302)
L:1467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51
L:1515 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54